

*Concl D*

said fine line of oxide superconductor having an outer coating of a conductive material.

REMARKS

The pending claims are 1-3, 22, and 23, with claim 23 being independent. Claims 1, 3, and 23 have been amended.

35 U.S.C. § 112, Second Paragraph Rejections

Claims 1 and 23, as previously worded, have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for using redundant language in the claims. Applicant has omitted the allegedly redundant portion of Claim 1, thus obviating the rejection.

Claims 1 and 3, as previously worded, have been rejected under 35 U.S.C. § 112, second paragraph, as containing confusing language. Applicant thanks the Examiner for providing suggestions as to language to further clarify Claims 1 and 3, which Applicant has adopted.

Applicant therefore respectfully submits that both grounds of rejection under 35 U.S.C. § 112 have been overcome.

Prior Art Rejections Over Hayashi

Claims 2, 3, and 23, as previously worded, have been rejected under 35 U.S.C. § 102(b) over Hayashi (U.S. Pat. No. 5,202,307). Without conceding the propriety of this

rejection, Applicant believes that this ground of rejection has been overcome by amending Claim 23 to recite that the wire is comprised of a "sintered, compact oxide superconductor," with "particles of a solidified metallic material" being dispersed therein. Support for this amendment may be found, for example, in Applicant's specification at page 11, lines 6-8; page 14, lines 10-12; page 15, lines 21-23; page 18, line 15; and page 23, line 16; and in Figure 1 of Applicant's drawings and the related text.

As amended, all of the pending claims clearly call for the superconducting phase to be continuous and the metal phase discontinuous. Webster's Third New International Dictionary defines "sinter" as follows: "to cause or become a *coherent mass* by heating without melting." (See Attachment (emphasis added)).

Hayashi shows in Figure 1 and discloses at Col. 2, lines 50-57, that the superconducting material, a ceramic powder, is mixed with a metal powder such that "the particles of the ceramic powder showing superconductivity are merely in proximity to each other but not in contact with each other." In contrast, Applicant claims a wire wherein the particles of the superconducting material are in contact with each other, in the form of a sintered, compact mass. The metal (e.g., silver or a silver alloy) is scattered within the superconducting material, occupying vacancies produced during heat treatment of the oxide.

Claim 1 has been rejected under 35 U.S.C. § 103(a) over Hayashi in view of Den et al. (U.S. Pat. No. 5,512,538). Applicant submits that Den et al. only discloses certain superconductor materials, and does not describe any superconducting wire. In particular, Den et al. does not show superconducting wire having a metal dispersed in vacancies in a continuous oxide superconductor, as Applicant claims, and therefore does not remedy the deficiencies of Hayashi.

Prior Art Rejection Over Anderson et al.

Claim 23, as previously worded, has also been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Anderson et al. (U.S. Pat. No. 5,071,826). Anderson et al. does disclose mixing a superconductor with metal, but it clearly states in Ex. 1, no. 3 that the superconductor is in particle form, with the particles being coated "with metallic silver approximately 0.05 microns thick." At Col. 4, lines 52-54, Anderson et al. discloses that "the silver additive tends to cement the superconductor particles together." Accordingly, Anderson et al., like Hayashi, fails to disclose a superconducting wire wherein particles of a metal are dispersed within the voids produced during heat treatment of a sintered, compact oxide superconductor.

Applicant submits that this application is now in

condition for allowance, in view of the claim amendments and arguments presented above. Accordingly, favorable consideration of the claims and passage of the subject application to issue is earnestly solicited.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence regarding this application should be directed to our below-listed address.

Respectfully submitted,

  
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